Claim Rejections Under 35 U.S.C. § 103(a)

The previous rejection of claims 18-34 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,194,064 (*Keely et al.*) in view of the admitted art has been upheld in the present Official Action. The Official Action states that *Keely et al.* shows all the features of the claimed invention except for the specific pressure requirement to crush the non-adhesive particles of the barrier layer and the tackiness of the pressure sensitive adhesives. The PTO asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to select an optimized combination of crushable particles for the barrier layer and suitable pressure sensitive adhesives with the proper thermal properties to make the surface covering.

In response to Applicant's argument that *Keely et al.* does not teach or suggest the use of other than hollow glass beads imbedded into the adhesive layer, the PTO responded that the Applicant has not recited any specific material limitations on the "non-adhesive particles" in claims 18-34. Furthermore, the PTO stated that *Keely et al.'s* non-adhering hollow glass beads would inherently prevent the covering from sticking to an adjacent article during storage and under certain loads. In response to Applicant's arguments that *Keely et al.* does not teach or suggest the claimed crush resistance value of the present application, the PTO states that *Keely et al.* teaches that the preferred hollow glass beads have a survival rate of 80% at a pressure of 200 psi.

Within the present application, Applicant has amended claim 18 to further recite the specific material limitations on the "non-adhesive particles" in claims 18-34. The specific materials listed do not include hollow glass beads. As stated in the Declaration, the use of

hollow glass beads requires that a substantial portion of the adhesive surface be covered with beads to prevent the self-adhering surface coverings from sticking to one another. Hollow glass beads have been found to be too fragile since the beads are easily crushed when they are sparsely deposited upon the adhesive as is claimed in the present application. The fragile hollow glass beads require a large number of beads to be dispersed on a surface in order to prevent them from being crushed. As previously discussed, when crushed, a large number of hollow glass beads results in a dust which prevents the decorative covering from sticking to the floor. Thus, hollow glass beads are not effective in the presently claimed invention. and their inclusion is undesirable.

Furthermore, Applicant has amended claim 18 to include that the non-adhesive particles cover between about 1% to about 10% of the adhesive surface. As described in the attached Declaration by Kean M. Anspach ("Declaration"), the sole inventor of the present application, a surface covering having more than 10% of its surface area covered with non-adhesive particles would be prevented from sticking to a surface substrate. The resulting lack of adhesion created by excess particles results from dust created by the crushed non-adhesive particles interfering with the adhesive layer. Essentially, a non-adhesive dust layer is deposited over the adhesive layer when an excessive quantity of non-adhesive particles are deposited and then crushed on the adhesive layer

In response to Applicant's previous argument that *Keely et al.* does not teach or suggest the use of other than hollow glass beads imbedded into the adhesive layer, the PTO responded that the Applicant has not recited any specific material limitations on the "non-adhesive particles" in claims 18-34. Applicant has now amended the claims such that newly amended claim 18 now includes a specific material limitation on the "non-adhesive particles" that does not

include hollow glass beads, which are hereby specifically excluded from the scope of the claimed invention. As shown in the attached Declaration, the use of hollow glass beads would be ineffective in the claimed invention. The use of hollow glass beads have been found to inhibit the properties of the adhesive layer in the present application.

Applicant further asserts that *Keely et al.* teaches away from that which is claimed in the present application by teaching the exclusive use of hollow glass beads or bubbles. As discussed above, the use of hollow glass beads in the present invention creates as dust layer when crushed that prevents the adhesive layer from sticking to the substrate. One of ordinary skill in the art would not be motivated to use the hollow glass beads taught in *Keely et al.* with that claimed in the present application since hollow glass beads would prevent or substantially impede the self-adhering surface covering from sticking to the substrate.

The PTO has stated in the present Official Action that *Keely et al.'s* non-adhering hollow glass beads would inherently prevent the covering from sticking to an adjacent article during storage and under certain loads. Applicant respectfully disagrees by noting that *Keely et al.* discloses the use of a release sheet or paper attached to the adhesive layer so that the wallpaper does not stick to itself due to pressure during winding (storage). The disclosure in *Keely et al.* clearly indicates that the wall covering taught in *Keely et al.* sticks to itself during storage, thus the need for the release paper. Additionally, *Keely et al.* teaches that the wallpaper rolls should be stored in an upright, vertical position to keep pressure low. The *Keely et al.* wall covering does stick to itself and to combat this problem this reference suggests the use of a release paper. Applicant's invention overcomes the problem of the need for release paper to prevent the self-adhering surface coverings from sticking to each other during storage and transportation. As

stated in the present application, at page 1, lines 19-24, release paper adds to the cost of the product and requires disposal after the paper is removed from the backing.

Additionally, as set forth in the Declaration, hollow glass beads are ineffective at preventing wallpaper coverings such as those taught in *Keely et al.* from sticking to each other if they are added to cover the claimed range of between about 1% to about 10% of the adhesive layer. As demonstrated by the Declaration, such hollow glass beads would be spaced too far apart to prevent the sagging. Sagging enables the stacked layers of wallpaper to come in contact with each other. It has further been shown that if the coverage of hollow glass beads is increased, the adhesive performance is compromised by the resulting dust created by the crushed hollow glass beads.

Applicant further asserts that *Keely et al.* teaches away from that which is claimed in the present application in teaching the use of a release paper. *Keely et al.* teaches that the release paper prevents the wallpaper from sticking to itself due to pressure during winding, and that the rolls should be stored in an upright, vertical position to keep pressure low. Col. 6, Lns. 51-60. One of ordinary skill in the art would not be motivated to modify that which is taught in *Keely et al.* to create the claimed self-adhering surface covering. As set forth in the present specification, the present invention overcomes the disadvantages of the prior art by providing a self-adhering surface covering which avoids undesired adherence of the surface covering under loads which can be experienced during shipping and storage to surfaces without employing a release player or paper. Pg. 4, Lns. 1-4. Thus, one ordinarily skilled in the art would not be motivated modify that which is taught in *Keely et al.* to conform to that claimed in the present application.

The PTO further asserts that it would have been obvious to one of ordinary skill in the art at the time the invention was made to select an optimized combination of crushable particles for

the barrier layer and suitable pressure sensitive adhesives with the proper thermal properties to make the surface covering. As previously discussed, *Keely et al.* only teaches the use of hollow glass beads or bubbles which are not compatible with the present invention. One of ordinary skill in the art would not have been motivated to optimize the particles taught in *Keely et al.* to create the claimed self-adhering surface covering.

Furthermore, as discussed, the present invention is a self-adhering surface covering that does not require a release paper. The non-adhesive particles of the present invention have been optimized to create a covering that does not need a release paper. *Keely et al.* teaches a wallpaper that has a release paper. An optimized wallpaper in *Keely et al.* would be one that can be moved around on a wall before being fixed into place and not one that prevents the covering from sticking to each other during storage. The optimization of the *Keely et al.* reference does not result in self-adhering surface coverings that do not stick to each other during storage. *Keely et al.* does not teach or suggest such optimization and in fact teaches away from such.

In response to Applicant's previous arguments that *Keely et al.* does not teach or suggest the claimed crush resistance value of the present application, the PTO states that *Keely et al.* teaches that the preferred hollow glass beads have a survival rate of 80% at a pressure of 200 psi. Applicant notes that this disclosed survival rate is not related to actual crush resistance of the adhesive/hollow glass bead composite layer. The physical property disclosed in *Keely et al.* for the hollow glass beads is measured on the bulk hollow glass beads themselves and is a standard method used to qualitatively compare crush resistance differences between microspheres. Within the cited reference, the hollow glass beads are said to be of the type which have sufficient strength to allow mixing with an adhesive by ordinary means, such as stirring under moderate conditions. Col. 6, Lns 21-24. The present application claims that the particles are distributed

substantially on the surface of the adhesive. As attested to in the Declaration, such a pressure distribution as disclosed in *Keely et al.* is only a bulk number based on the hollow glass beads themselves and is not a value of crush resistance of the adhesive/hollow glass bead layer. The present application claims that the non-adhesive particles are disposed substantially on the surface of the adhesive and cover between about 1% to about 10% of the adhesive surface. *Keely et al.* teaches that hollow glass beads are encased in an adhesive.

Keely et al. does not teach or suggest a decorative covering having an adhesive layer wherein about 1% to about 10% of the adhesive surface is covered with substantially non-adhesive particles. As shown in the attached Declaration, the claimed coverage range of from about 1% to about 10% is critical to the present application. An excess of crushable particles greater than about 10% causes a dust layer to form on the adhesive layer when the particles are crushed, which impedes the self-adhering surface covering from sticking to a substrate. Additionally, particles covering less than about 1% of the adhesive layer would be unable to create a barrier that would prevent the decorative coverings from sticking to each other. Thus, the claimed range is critical to the present application.

Additionally, as illustrated in the attached Declaration, wallpaper is highly flexible and relatively thin, while the claimed self-adhering surface covering of the present application is typically fairly rigid in comparison, since it is designed as a floor covering. Therefore, the non-adhesive particles in *Keely et al.* need to be closer together to prevent the expanse spanned by the wallpaper between each particle from sagging since the wallpaper is so flexible. A floor covering that is substantially more rigid than wallpaper does not have such a tendency to sag, thus the non-adhesive particles can be spaced apart at greater distances. Thus, one skilled in the art would not be motivated to modify that which is disclosed in the cited reference.

Thus, *Keely et al.* does not render claim 18, as amended herein, of the present invention obvious and it is respectfully requested that the rejection of this claim be withdrawn. Furthermore, since claims 19-34 depend from and have further limitations in excess of base claim 18, claims 19-34 should also define over *Keely et al.* as a matter of law.

Thus, Applicant respectfully submits that claims 18-34 of the application are believed to be in a condition for allowance and an early notice to such effect is earnestly solicited.

Respectfully submitted,

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APPENDIX

18. (Once Amended) A self-adhering surface covering comprising:

a substrate;

a pressure-sensitive adhesive layer disposed on the substrate and having an adhesive surface distal from the substrate, the adhesive layer comprising a substantially non-stringing adhesive; and

a barrier layer disposed substantially on and covering between about 1% to about 10% of the adhesive surface, wherein the barrier layer comprises substantially non-adhesive particles selected from the group consisting of calcium carbonate, barium carbonate, calcium sulfate, barium sulfate, aluminum sulfate, molybdenum disulfide, titanium oxide, aluminum hydroxide, alumina, silica, magnesium oxide, calcium oxide, calcium hydroxide, ferrous oxide, ferric oxide, cured rubbers, ebonite, resins, and combinations thereof, wherein and the substantially non-adhesive particles exhibit a crush resistance of at least about 10 psi.